

ABSTRACT

A gait generating system for a mobile robot has  $n$  dynamic models and determines a first gait parameter defining a desired gait such that the boundary condition of a gait on a first dynamic model is satisfied. The first gait parameter is corrected step by step by using an  $m$ -th dynamic model ( $m$ : integer satisfying  $2 \leq m \leq n$ ), which is each dynamic model other than the first dynamic model, and an  $m$ -th gait parameter that satisfies the boundary condition on the  $m$ -th dynamic model is determined. The  $m$ -th gait parameter is determined by correcting an object of an  $(m-1)$ th gait parameter to be corrected on the basis of the degree of deviation of the gait generated on the  $m$ -th dynamic model by using the  $(m-1)$ th gait parameter from the boundary condition. A final determined  $n$ -th gait parameter and an  $n$ -th dynamic model are used to generate a desired gait.